

FIG.1

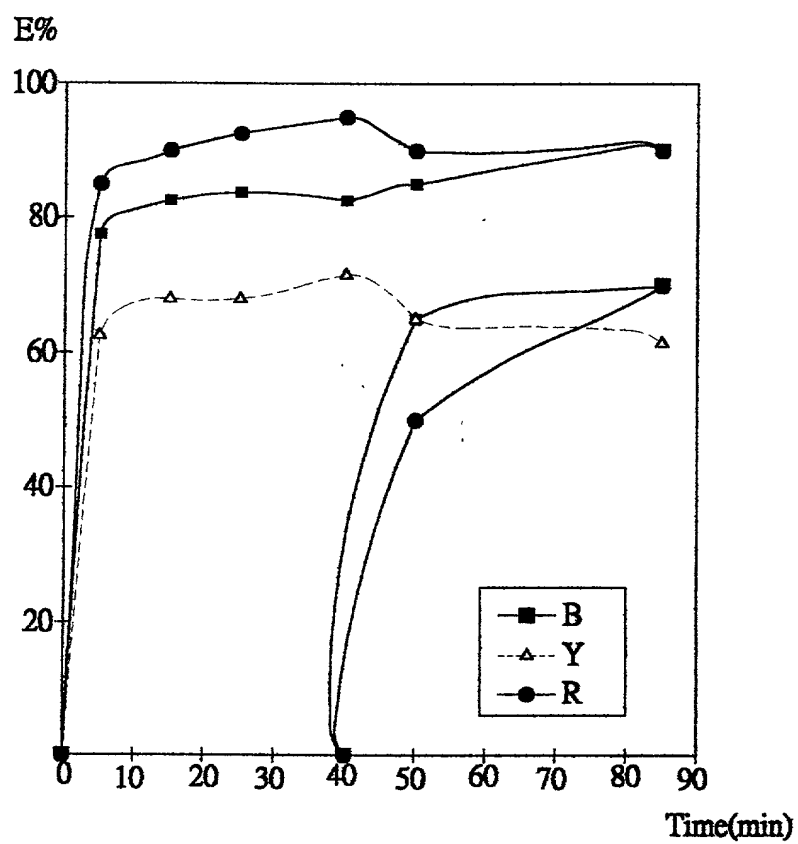


FIG.2

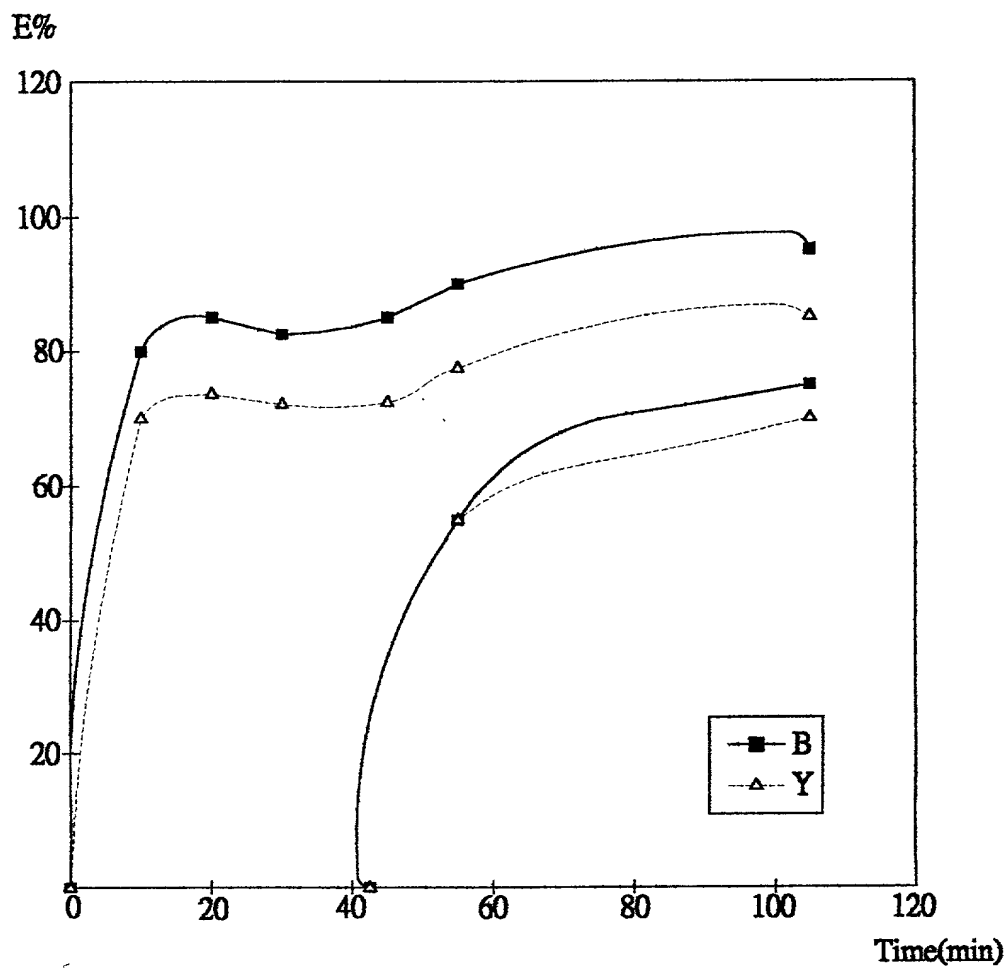


FIG.3

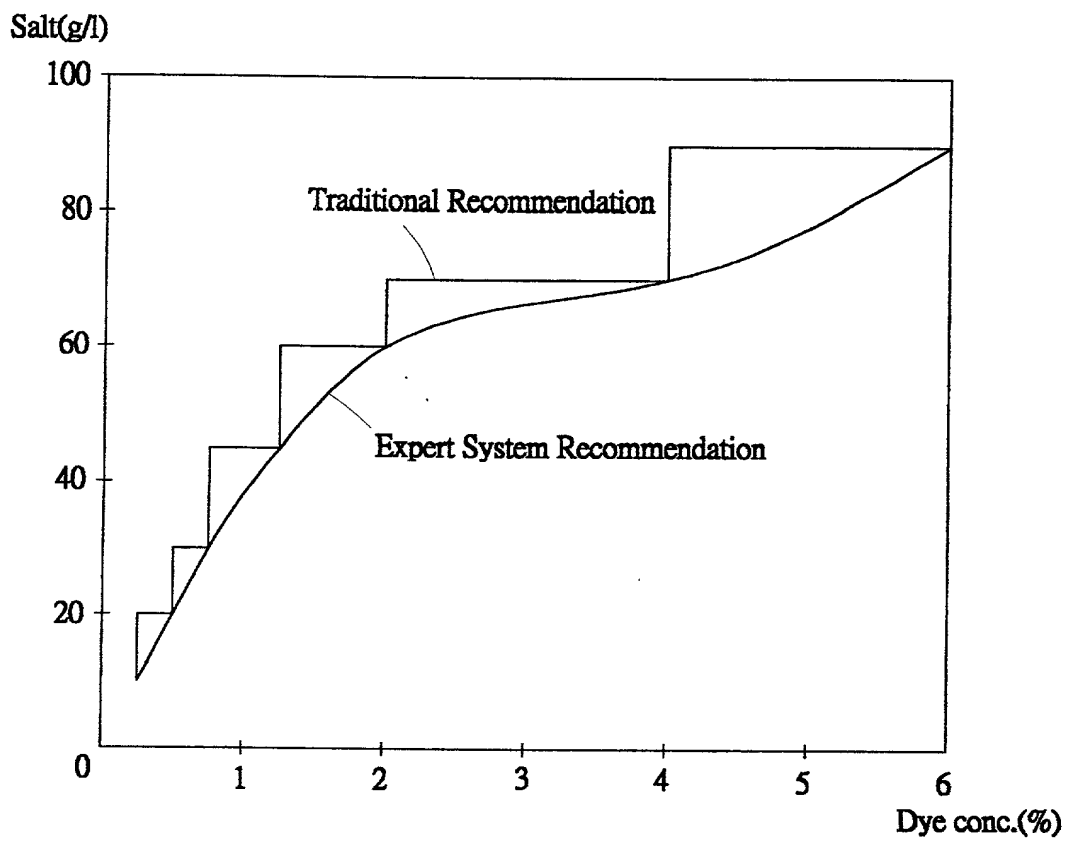


FIG.4

Alkali(g/l)

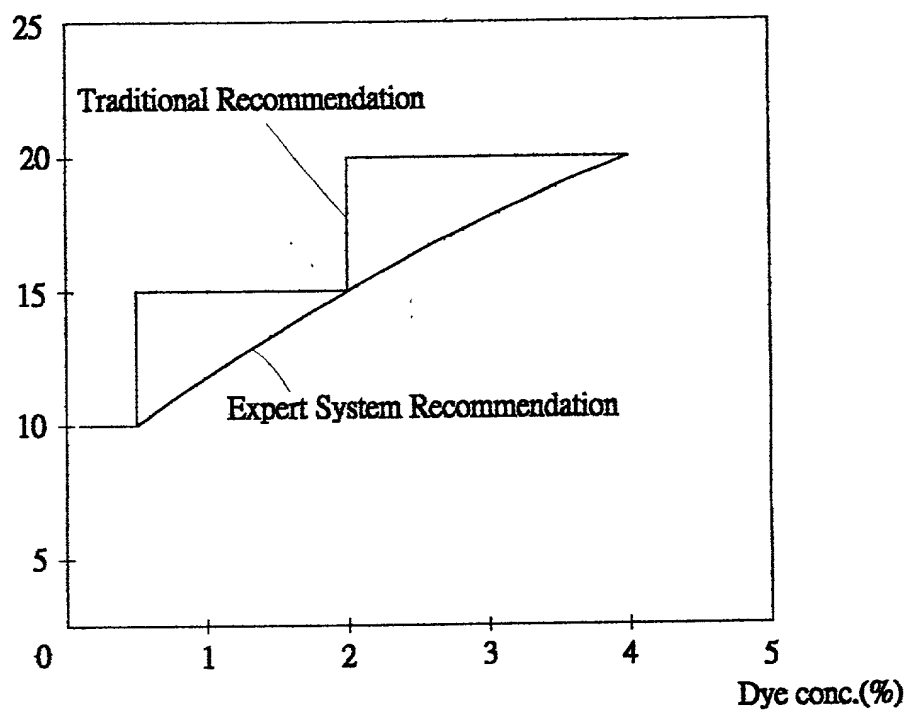


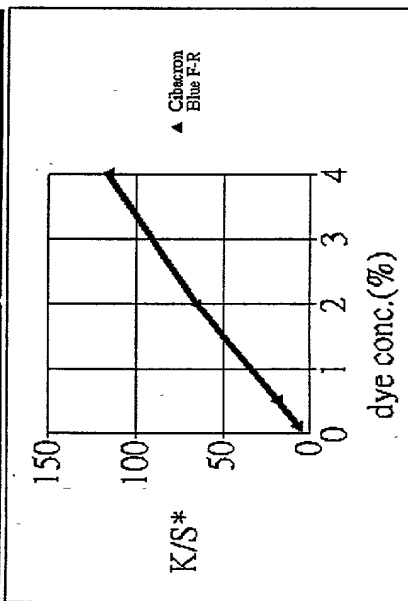
FIG.5

Dyestuff Database

name counts : 29

type

build-up curve



exhaust curve

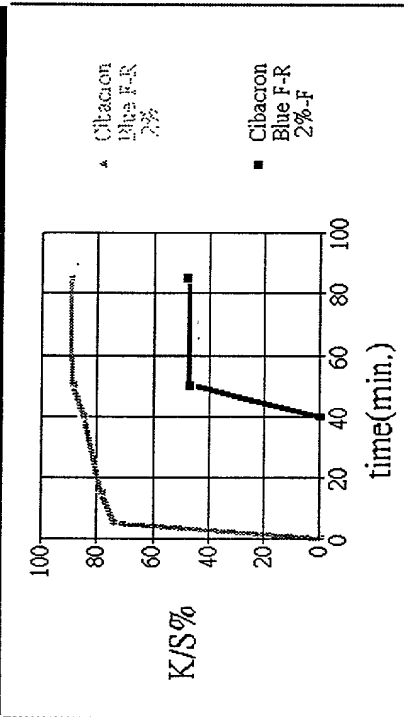


FIG. 6

dye build-up and feature parameters

depth	1st exhaustion	final exhaustion	fixation	reactivity	hal.
7.23	87.64091	87.02986	63.11192	101.6598	4
18.88	84.11723	88.24448	46.3824	97.8284	5
65.9	85.0425	90.06641	47.98203	98.17905	5
116.3	70.39645	84.78133	43.34097	91.48753	5

exhaust curve

recine	conc. (%)
1	10
2	20
3	30
4	40
5	50
6	60
7	70
8	80
9	90
10	100

recine	conc. (%)
1	10
2	20
3	30
4	40
5	50
6	60
7	70
8	80
9	90
10	100

Wavy F-G	105
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Red F-B 105

07	40
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15	▶
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```
std::process
```

Lab Process

good

end

cotton knitted

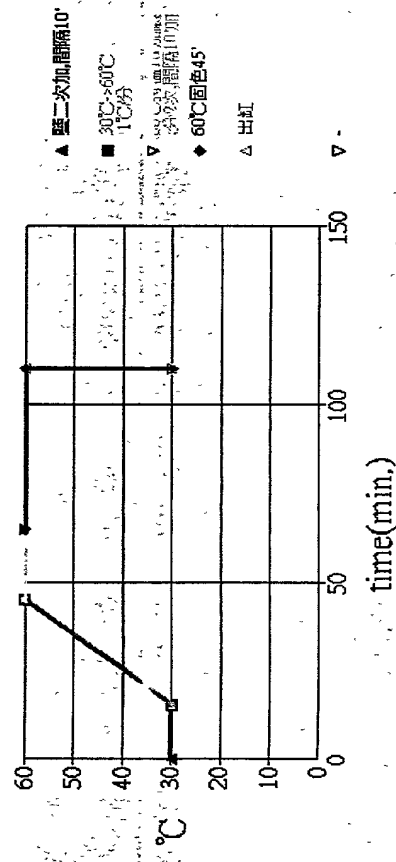
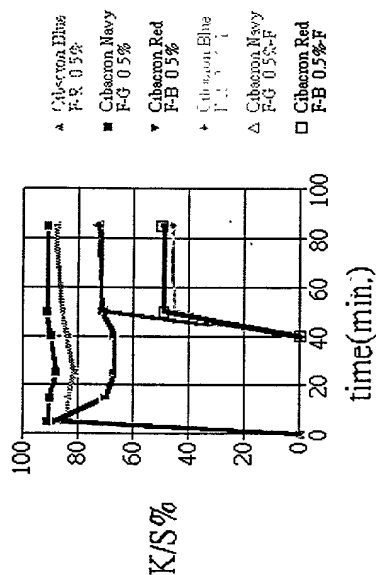


FIG. 7

Process Optimization

- Dyeing Condition | menu | end

woven kind dye type 80°C | c std process e migr process optimization

specification	width(in)	dyeing	recipe
tricot	70	Evercion Blue H-EGN 125%	0.5 %
	linear wt.(g/y)	Evercion Blue H-ERD	0.5 %
	200	Evercion Navy Blue H-ER	0.5 %
	total wt.(kg)	Na2SO4	50 g/l
	700	Na2CO3	20 g/l

m/c No.	cap.(kg)	nozzle : 85mm
0H-1	360	fabric speed : 350y/min.
type	tubes	3batch(loading rate 64.%)
JetFlow	2	cycle time : 3.33min.
fabric speed(y/min.)	loading rate(%)	dyeing time : 185. min.
max. 450	max. 80	
optim 350	optim 60	
min. 200	min. 30	

fabric cotton knitted

cycle time(s) 200 | save

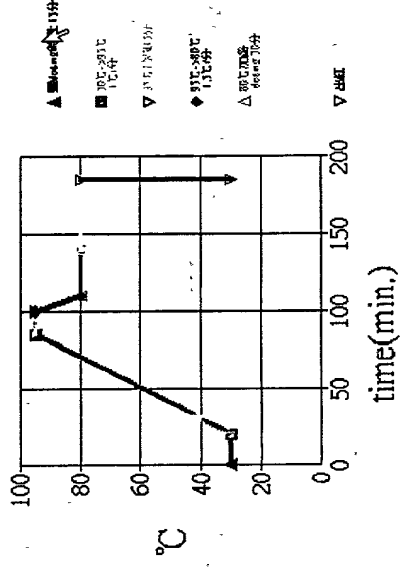


FIG. 8

Recipe Optimization

type of dyes		std LR	used LR
60°C	10	20	
recipe		conc. (%)	conc. (%)
Cibacron Blue F-R	1	1	1
Cibacron Navy F-G	1	1	1
Cibacron Red F-B	1	1	1
Na2SO4	50. g/l	65.1 g/l	
Na2CO3	18. g/l	18. g/l	

normal

optimal

specified

specified

menu

end

liquor ratio dependency

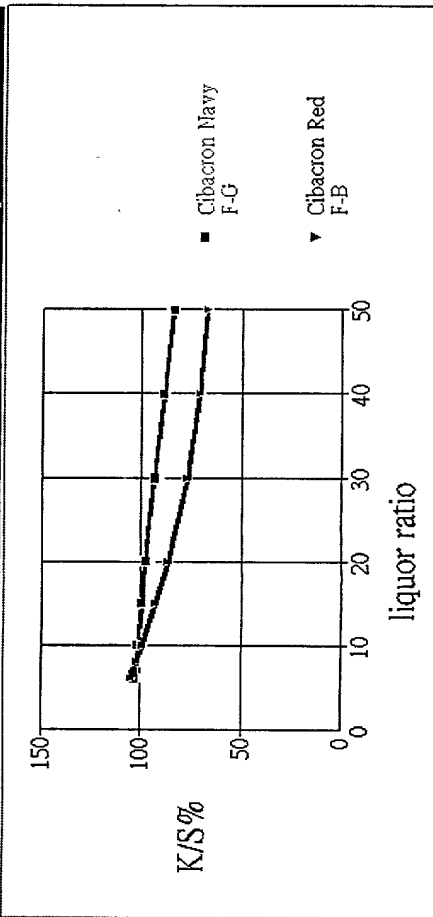


FIG. 9